

BULLETIN

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COMMENT

Welcome to the new EANHS Bulletin! And "Thank you!" to everyone who responded to the questionnaire. Your Editors were pleasantly surprised to see that, contrary to our fears, you seem to like what we are doing. Later in this issue I will give you the results of the survey.

Before going any further, I wish to thank my former Co-editor, and previously sole Editor, of the EANHS publications for all the long hard hours he has put into making the Bulletin and Journal the quality publications that they presently are. While time constraints and other considerations have caused him to step down as Editor, we look forward to his continued input and assistance in other ways with these publications.

During the past few years the society has been broadening its scope of interest and activity. One of the ways we are doing this is by being a voice for conservation. During this time your society has been vocal on conservation issues, particularly with regard to forests. With direction from the Executive Committee, the Chairman has written to Government Ministers and other officials, thanking them for actions or public statements in support of forest conservation. He has also written, on behalf of the Society, to point out conservation issues and urge action for the protection of Arabuko-Sokoke Forest and other forests with biodiversity or cultural values. When important issues such as the degazettement of Arabuko-Sokoke Forest have come up, we have also issued, either alone or jointly with other like-minded groups, press releases stating the views of the Society. We are very pleased to see from both the Bulletin questionnaire and the general Society questionnaire that the membership supports this policy.

I am hoping that this column can in future be a venue for airing members' views on various conservation issues. Anyone with a serious comment to make on recent events, problems, potential problems, grievances and also successes in the field of conservation, should let me hear from them. I look forward to a stimulating column in future.

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ARTICLES

THE DECLINE OF ANGOLAN COLOBUS
MONKEYS *COLOBUS ANGOLENSIS*
PALLIATUS IN DIANI

Though not currently listed as threatened, *Colobus angolensis* ssp. *pallatus* may be at least vulnerable to extinction in East Africa. Although *C. angolensis* enjoys an extensive range in central African rainforests, the subspecies *pallatus* is restricted to isolated, fragmented and largely threatened coastal forests of Kenya and Tanzania. Its current distribution in Kenya includes the Shumba Hills National Reserve, Mwalimnganje Forest Reserve, Gogoni Forest, and relic forest patches in Diani, Gali, Kuwinda, Ranisi, Chale and Shumora, having already disappeared from approximately one third of its former range which included Kilifi (Tamura 1986) and Tsavo West (Estes, 1992). In Tanzania it is found in the Usambara mountains, the Selous Game Reserve and coastal forests in southern Tanzania. It is very isolated population of *C. angolensis* in the Malindi mountains may be a distinct subspecies (Nishida *et al.*, 1981). While at first glance this handsome black and white monkey is easily confused with its better known relative, the guereza (*Colobus guereza*), it much has a similar glossy contrasting black and white coat, the Angolan colobus differs by having white epaulettes (mantle in the guereza), long white cheek hairs and a white tail tip (fluffy white tail in guereza).

This report refers to a census conducted in Diani where long time residents have noticed a decline in the number and sizes of Angolan colobus groups over the past 10 years or so. Thirty volunteers participated in the primate census of Diani that established the population and distribution status of this colobus and other primate species (baboon *Papio cynocephalus*, vervet *Cercopithecus mitis*, and Sykes' monkeys

Cercopithecus mitis albigularis)

Seven teams of 4 volunteers searched blocks of forest on the 30th November and 1st of December 1996. The aim was to establish a total count of colobus by groups, group sizes and habitat locations. Other primate species groups were also enumerated. The area surveyed was from the Tiwi River in the north to the Neptune Hotel in the south, approximately 9.7 km² (800 m wide and 12 km long), including two kaya forests lying approximately 1 km west. Forest blocks were classified as Diani Forest, modified forest and the kayas.

A total of 85 primate groups were enumerated with colobus and Sykes' being the most common (table 1).

The total population of colobus monkeys in Diani is estimated to be 234 animals based on an average group size of 6. Three solitary colobus were observed, one was a female. One bachelor group of three males was also observed. The overall density of colobus was 24 individuals/km² ranging from 11/km² in the kayas to 72/km² in Diani forest. Diani Forest, occupying only 1.5 km² (m 15% of the area censused) contained almost half of the primate population of Diani with 24 primate troops/km² or 164 monkeys/km². Almost half of these were colobus. The Diani and Ukunda kayas, containing similar closed forest to Diani Forest, were surprisingly deficient in all species of primates, while the modified areas had more primates than the kayas.

Table 1. Group counts for each primate species by census block in Diani

Location	Colobus	Sykes'	Vervet	Baboon
Kayas	3	3	1	0
Diani Forest	18	17	0	1
Modified	17	18	6	1
Total	38	38	7	2

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Over the past 24 years, the primate population of Diani has undergone dramatic fluctuations. From 93 colobus monkeys/km² in 1972 (Moreno-Black and Maples, 1977) the numbers rose to 156/km² in 1989 (Frankfurt Zoological Society, 1989) and dropped to 73/km² (this study). This trend is also reflected in the Sykes' monkeys, which increased from 104/km² in 1972 to 230/km² in 1989 and dropped to 78/km² by the time of this study. These trends reflect the huge loss of forest area (75%) between 1972 and 1989 that may have resulted in the remaining forest patches. The subsequent decline in population reflects the population subsiding as it approaches a carrying capacity for the forest area. Despite its local

now only a few acres each. Forest loss and road kills are likely to be the main cause for the decline here, although use of colobus pelts in traditional dance has also been reported. Other Kenyan populations of this primate face similar futures; the next 10 years will see development of forest land in Chale and Shimoni while even protected kayas have been allocated for development. The densities of colobus in Diani forest demonstrate the importance of closed canopy forest for colobus monkeys. Some monkeys survive in residential gardens where modified forest provides sufficient canopy cover for movement and feeding. These areas may play an important role of maintaining small isolated populations

of these monkeys in the future. To prevent the Angolan colobus from blinking out in Diani, the Wakuluzu Trust aims to prevent further forest loss. They are conducting conservation and public awareness activities such as building of rope bridges to provide safe road crossings for the monkeys and are working with residents of Diani to enrich the forest with colobus food plants. The Shimba Hills National Reserve and Mwalunganye Forest Reserve currently represent the only significant forest areas that are safe for these monkeys in Kenya.

The future of this subspecies of colobus in Africa depends also on its status in Tanzania. One report of a precipitous decline in the number of colobus groups in the Selous between 1979 (Rogers,

1980) and 1992 (Decker, 1994) from 34 groups to 9 suggests a very serious situation (although Decker suggests that technique may be partly responsible for this discrepancy). A review of status of these monkeys in Tanzania and Kenya is badly needed in order to update the IUCN Status Survey and Conservation Action Plan of African Primates to allow for appropriate funding to effect their conservation.

Acknowledgements

This census is one of a series of surveys to be conducted on the Angolan colobus in Kenya. The research is supported by Wakuluzu, Friends of the Colobus Trust. The author is grateful to all the individuals who participated in the census, and to all the residents and hotels in Diani who permitted us to count monkeys on their properties.

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Angolan black and white colobus courtesy of Wakuluzu, Friends of the Colobus, Trust

importance, in comparison to other sites, the Diani forest primate biomass density is quite low at only 496 kg/km, compared to 709 kg/km for Ituri, Zaire (Thomas, 1992) and 1,034 kg/km² in Lomako (McGraw, 1994). Diani, however, contains the highest known *Colobus angolensis* densities of between 24/km² and 156/km² versus 5.8/km² in Lomako and 7.7/km² in Ituri. However, the closely related red colobus *Colobus badius* have been reported to occur at densities of over 300 individuals/km² in Kibale (Struhsaker, & Oates, 1975), while densities of over 300 individuals/km² have been reported for *Colobus guereza* on the Kikuyu escarpment and over 500/km² in the Tanzanian highlands (Kingdon, 1971; Kingston, 1971; Estes, 1992).

The dearth of colobus and other primates in the kaya forests may reflect a history of hunting by local peoples. These forests, protected under the National Monuments Act, could be used as future sites for translocation of colobus monkeys. However, illegal activities in these forests must be controlled first.

The colobus monkey population in Diani has certainly declined over the past 10 years and may be in danger of disappearing in this fast growing tourist resort area. Most of the monkeys are concentrated in an area a fraction of its former extent, and home ranges for each troop are

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WHAT'S HAPPENING TO THE BLUE SWALLOW *HIRUNDO ATROCAERULEA* SITES IN BUSIA AND SUBA DISTRICTS, KENYA?

Introduction

Forests, wetlands and moist grassland are among the most threatened habitats in Kenya today (Fanshawe & Bennun, 1991). Grassland in the wetter central and western parts of the country is rapidly giving way to cultivation or intensive livestock farming. This habitat is important for at least five globally threatened or near-threatened species of birds in Kenya (Collar *et al.*, 1994), and many more that are regionally threatened (Bennun & Ngoroge, 1996). Among the globally threatened birds relying on moist grassland is the Blue Swallow *Hirundo atrocaerulea*, one of 18 species of hirundines occurring in Kenya.

This species is a slim-looking swallow with an almost wholly glossy blue body and extremely long tail streamers in males (Turner & Rose, 1989. Zimmerman *et al.*, 1996). It has a small amount of white on the flanks and primary shafts, though this is difficult to see in the field.

An intra-African migrant, the Blue Swallow breeds in upland grasslands along streams, using potholes and old aardvark burrows (and, at least in Tanzania, buildings: Britton, 1980). Nesting sites are known from South Africa

(Natal and eastern Transvaal), Swaziland, the eastern highlands of Zimbabwe, the Nyika Plateau of Malawi and (barely) Zambia, and the highlands of Mozambique and south-western Tanzania (Collar *et al.*, 1994). In the non-breeding season the birds move north to open grassland in eastern Zaire, Uganda and western Kenya. In Kenya it is a scarce bird, recorded from April to September in open grasslands in Bungoma, Mumias and Busia Districts, and in Ruma National Park (Lewis & Pomeroy, 1989, Zimmerman *et al.*, 1996). It prefers small pockets of open grassy fields, often with bushes and trees.

Blue swallows occur solitarily, in pairs or small family parties. They are not very gregarious but groups of up to 40 occur (Dyer, 1988). However, up to 100 birds have been recorded roosting at a flooded grassland near Mungatsi in Nambale, Busia District (D.A. Turner, pers. comm.). Blue Swallows swoop over grasslands and up and down gullies and valleys, close to the ground, feeding on aerial insects (Keith *et al.*, 1992). They can move over great distances in search of suitable foraging sites.

A major decline has occurred in the numbers of this species. Many parts of its breeding range have undergone profound changes, with grassland giving way to cultivation, human settlement and forest plantations. Where grassland habitat is left, it often suffers from excessive burning and overgrazing. The pockets of grassland that these swallows prefer for wintering are also fast disappearing in East Africa. This species is uncommon everywhere in its range and is listed as globally and regionally Vulnerable (Collar *et al.*, 1994, Bennun & Ngoroge, 1996).

The status of the wintering grounds of this species in Kenya has not been documented. For this reason, we carried out a three-day survey on the status of the Blue Swallow's roosting and feeding sites in areas around Busia as part of the Important Bird Areas programme for Kenya.

Methods

We conducted our survey from 14 July to 16 July 1996. We first visited the site near Mungatsi, where 100 Blue Swallows have been known to roost (D.A. Turner, pers. comm.). Here we made observations on the extent of the grassland, the land use patterns, presence of livestock and human activities in the area. We also looked for any Blue Swallows. Using the roads passing through Bunala-Matayo-Mundika-Nambale-Mungatsi-Munamir-Lugulu-Butula and back to Bunala, and Lugulu-Nambale, as our transect, we searched for other areas of flooded grasslands—the Blue Swallow's presumed favoured habitat. At every suitable site that we encountered we made a list of bird species using the site and again estimated the extent of the grassland and also recorded land-use patterns and human activities. We collected data only in sites with at least 0.5 ha of flooded grassland. On 15 July from 16:00h to 19:00h and 16 July from 6:00 h to 11:00 h, we watched for and recorded any swallows that were over-flying the Mungatsi site.

We also made a brief visit to Ruma National Park in Suba District, a site where the Blue Swallow has regularly been recorded (D. A. Turner, pers. comm). Ruma (0°40'S, 34°15'E) lies in southwest Kenya, only a few kilometres from the shores of Lake Victoria. The park is predominantly grassland interspersed with thickets of *Acacia* and *Balanites* spp. Apart from the southernmost tip, it is completely fenced. The surrounding land is mainly cultivated, with a little open pasture. We spent most of 21 August at Ruma, searching for the swallows, but the weather was cloudy and dry in the morning and all afternoon.



Blue Swallow by L. A. Depew

Results

Busia

Busia has a relatively high human population that is evidently growing very fast. This has resulted in intensive agricultural activities. Furthermore, a Namibie Sugar Company is presently being established and the local people have been urged to grow enough sugarcane to warrant the setting up of a sugar processing plant. During the survey, we found only four grassland patches larger than 0.5 ha. These sites were Mungatsi, Malongo Sikoma and Malanga (see below). According to our informants, these sites are on the verge of being cultivated. Most areas that we went through on the southern parts along the Lughu-Bulula-Bujinali Roads were relatively flat and more intensively cultivated. However, a mosaic of small patches of unflooded grasslands occurred, none of them more than 0.5 ha in size.

No Blue Swallows were recorded at any of these sites. Other hirundines were present, including Lesser Striped Swallow *Hirundo abyssinica*, Wire-tailed Swallow *H. smithi*, White-headed Sun-wing *Psaltriparus albiceps* and Black Sun-wing *P. holomelas*. In all sites, swallows were active at around 10:00 h and after 15:00 h. Other species characteristic of flooded grassland were also recorded. These included Yellow-fronted Widowbird *Euplectes macrurus*, Hartlaub's Marsh Widowbird *E. hartlaubi*, Fan-tailed Widowbird *E. wallaris*, Marsh Tchagra *A. hagenianus* and Broad-tailed Warbler *Schoenocola brevirostris*. Of the species we encountered, Hartlaub's Marsh Widowbird is listed as regionally Vulnerable and Grey Crowned Crane *Balenica regulorum* as regionally Near-threatened.

Mungatsi

This site is located at latitude 0°27'67" N and longitude 34°19'69" E, altitude 1220 m, 2 km from Mungatsi market along the Mungatsi-Munani Road. It consists of a small patch of flooded grassland measuring 900 m by 400 m that slopes at a gradient of about 30 degrees towards a small stream, a tributary of River Sio, which runs along its length. A small patch of riverine forest and scrub along the stream harbours a variety of bird species. This privately-owned piece of grassland is surrounded by intensive agriculture with maize and sugarcane.

The dominant crops, grazing of livestock is also a major activity. During our visit, maize cultivation is as being extended into the site. Very recently, grassland used to be more extensive on both sides of the valley (D. A. Turner, pers. comm.). During the survey there was a great deal of disturbance and noise from tractors that were digging up a road by the site. This site, where the Blue Swallow has been recorded regularly in the past, is now under threat from cultivation, or grazing and road construction. We were also informed that the site is as soon to be subdivided into small pieces for sale, posing perhaps the most serious threat of all.

Trapping of birds for food, mainly by young boys, is very common, especially during April. With the aid of the pictures in our guidebook, we established that the species trapped included storks and turndowns. We were told that a bird can be sold for 100 to three Kenia Shillings.

Malayo

This site is located at latitude 0°23'00" N and longitude 34°08'77" E, altitude 1200 m, at the point where the Kasumu-Busia road crosses River Sio. The site is an extensive flat, flooded grassland of about 3000 m by 700 m, with its length running along River Sio. Cattle are grazed in the site and its fringes are intensively cultivated, maize being the dominant crop.

Sikoma

This site is located at latitude 0°24'56" N and longitude 34°11'00" E, along the Namibie-Mungatsi Road. This is a small patch of about 120 m by 80 m, a flooded grassland extending on both sides of a valley. This site is fringed by intensive agriculture, mainly maize cultivation.

Malanga

This site is located at latitude 0°25'56" N and longitude 34°18'44" E, altitude 1220 m, and slopes into the

Namaderema stream, a tributary of River Siu. Its extent is about 200 m by 150 m. It is fringed by maize fields and there are cattle grazing around it.

Ruma

We found no Blue Swallows at Ruma. The Park itself contains extensive grassland, although most of this appears not to be seasonally flooded. There was evidence that some grassland was regularly burned. Sand Martins *Riparia riparia* and Barn Swallows *Hirundo rustica* occurred in good numbers over the grassland. Grassy areas also occur outside the park boundaries and there seems to be less pressure on these areas than in Bura. Our survey was too brief to know whether Blue Swallows might use these areas.

With the wet conditions, our bird list for Ruma was only 33 species, including the regionally Near-threatened Brown Snake Eagle *Circus cinereus* and the Black Coucal *Centropus grillii*.

Discussion

Increased agricultural activity and the setting up of a sugarcane factory appears to spell doom to the small pockets of grassland on which the Blue Swallow depends. In Kenya the species has only been recorded in one protected area, Ruma National Park, where suitable habitat remains, but probably only a small proportion of the wading birds occur there.

During our survey we failed to find the species anywhere, even at Mung'ata where it has been recorded roosting regularly before. Normally at least one pair feeds within the vicinity of the roosting site during the day (L. Lens, pers. comm.) but we did not encounter them. Either the birds failed to arrive this year, were unable to find sufficient undisturbed habitat, or for some other reason were feeding and roosting elsewhere.

Swallows move long distances in search of prey (Turner & Rose, 1989), which suggests that a mosaic of suitable grasslands could sustain a wading population. However, the presence of a suitable roosting site may be critical. If the Blue Swallows continue to use Mung'ata, its protection, perhaps by land purchase if no other option exists, is an urgent priority. This site is also home to a number of other species that are difficult to find elsewhere in Kenya, such as the Green Crombec *Mniotilta varia* (D. A. Turner, pers. comm.). It is already visited by many birdwatching groups and has potential for small-scale bird tourism.

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WAS SANGO BAY A PLEISTOCENE REFUGIUM?

Sango Bay is in Uganda, on the west coast of Lake Victoria, about 15 km north of the border with Tanzania. Between about 3 and 30 km inland from the lakeshore lie a series of Forest Reserves, the largest of which, Namalala, extends across the border where it is known as Muzira forest. Collectively, these have become known as the Sango Bay forests, because early this century, timber was exported from them by a narrow-gauge railway leading to a jetty in Sango Bay, from whence it could be shipped across the lake.

The most important timber came from three species of *Podocarpus*. This is curious, because two of these species are montane plants, not usually occurring below 1500 m, yet the altitude of the Sango Bay forests, which are flat and seasonally flooded, is only just over 1100 m (Montane as used here refers to land above 1500 m). *Podocarpus* are also interesting for being gymnosperms, closely related to juniper. However, there is little *Podocarpus* now left in the Sango Bay forests; they were largely worked out by the 1940s (Eggeling & Dale, 1951; Howard, 1991), and appear to regenerate slowly.

During 1994 and 1995, the authors took part in a series of surveys to assess the biodiversity values of the many wetland and forest habitats in the extensive Lake Victoria plains from Lake Nabungabo in the north to the Tanzanian border in the south. Plants and birds were studied in more than 20 localities, together with other animal groups (Fuller et al., 1995). For convenience, we call this whole

region the 'Sango Bay area'.

Hamilton (1975) seems to have been the first to propose that the forests around Sango Bay may have survived the dry periods of the late Pleistocene, when most Ugandan forests disappeared. However, his suggestion that it was but a minor refugium is supported by Struhsaker (1981) because, although there are only four species of monkeys there, two are distinctive subspecies, one belonging to the Rwenzori colobus *Colobus angolensis adolfi-frederici*.

The presence of *Podocarpus* and other montane trees in the Sango Bay area has been known for many years (Eggleston and Dale, 1951; Howard 1991, page 257) writes that 'a number of montane species occur here, including *P. milampianus*, *P. gracilior*, *Ilex mitsis*, *Psychotria megastactica* and *Olea africana*, and their occurrence here would seem to support the view that this is a relic forest'. There are now known to be at least seven highland species of trees on the Sango Bay list, as well as several species of shrubs (see Appendix). But the fact that there are also many non-woody montane plants, and several species of birds, seems not to have been documented before.

We provide in the Appendix a complete list of records for plants that are normally confined to montane area, above 1500 m, but which have been recorded below about 1150 m in the Sango Bay area. Particularly notable are species such as *Clusia abyssinica* that in Kenya occurs only above 2000 m (Agnew & Agnew, 1994).

We recognise that a species may have different altitudinal preferences in different parts of its range. Thus most of the insectivorous plants species of *Drosera* and *Utricularia*, which occur near Lake Nabugabo, are montane species in Kenya (Agnew & Agnew, 1994) but are found at other lower sites in Uganda. Hamilton (1974) records other examples of montane species occurring at exceptionally low altitudes, in or near swamps, for example, *Nymphaea* swamp forest in Mabira Forest, and *Rapanea* and *Ilex* in *Syzygium* swamp forest in the southwest of Uganda. Other species such as the cosmopolitan bracken, *Pteridium aquilinum* are predominantly montane, but occur sporadically at altitudes down to 300 m, this species is also locally common in the Sango Bay area, especially in disturbed habitats.

The contrast between the percentage of bird species which are montane (barely 1%) and plant species (4%) adds support to the idea of the Sango Bay area having relic forests. Plants tend to be less easily dispersed than birds and would therefore have been more likely to be 'left behind' as the forests spread again at the end of the last Ice Age.

Of the birds, Friedmann and Williams (1969) recorded the African Black Duck *Anas sparsa* in the Sango Bay area, and Cinnamon-chested Bee-eater *Merops oreobates* and Equatorial Akolai *Sheppardia oequatorialis* in the Sango Bay forests. During surveys of some of the habitats near the forests during 1994 and 1995, Pomerey and Otim found a population of Chabbi's Cisticola *Cisticola chabbi* in a woodland of *Acacia kirkii* just to the north of the Malabigambo section of

the forest.

A look for possible common characteristics amongst the plants and animals which seem to have been 'left behind' to the Sango Bay area as temperatures and rainfall increased at the end of the Pleistocene would be an interesting topic for further research.

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Appendix

Montane species of plants recorded from the Sango Bay area, at an altitude of below 1150 metres. All records are of herbs, and are from the present study, except where otherwise shown. Information on altitudinal ranges in inland East Africa is mainly from Agnew and Agnew (1994) and Beentje (1994).

Acanthaceae	<i>Acanthus pubescens</i>	S
	<i>Dichroptera laxa</i>	
	<i>Dioscorea radicans</i>	
	<i>Pseudoranthemum ludovicianum</i>	
Adiantaceae	<i>Pellaea domana</i>	F
Aquifoliaceae	<i>Ilex mitsis</i>	T
	Howard (1991)	
Araliaceae	<i>Polyscias fulva</i>	T
Caesalpiniaceae	<i>Cassia kirkii</i>	
Convolvulaceae	<i>Astropomena granii</i>	
Enphorbiaceae	<i>Aculypha brachystachya</i>	
	<i>Clusia abyssinica</i>	

	<i>Phyllanthus fischeri</i>	S
Hypericaceae	<i>Savagesia erecta</i>	
Labiatae	<i>Ayuga remota</i>	
	<i>Leucas deflexa</i>	
Malvaceae	<i>Sida acris</i>	
Meliaceae	<i>Carapa procera</i>	
Monimaceae	<i>Xymalos monospora</i>	T
Oleaceae	<i>Olea africana</i>	T
	Howard (1991)	
Orchidaceae	<i>Dioscorea walteri</i>	
Papilionaceae	<i>Etiopia cordifolia</i>	
Podocarpaceae	<i>Podocarpus milariyonius</i>	T
	Eggeling & Dale (1991)	
	<i>P. gracilior</i>	T
	Howard (1991)	
Primulaceae	<i>Lysimachia rehmeriana</i>	
Rubiaceae	<i>Psychotria megistosticta</i>	T
	Howard (1991)	
	<i>Borreria princeps</i>	
Scrophulariaceae	<i>Buchnera ruwenzoriensis</i>	
	<i>Cynium janetiae</i>	
	<i>Ilysanthes parviflora</i>	
	<i>Lindernia diffusa</i>	
	<i>Sopubia munzii</i>	
Solanaceae	<i>Physalis peruviana</i>	
	(exotic)	
Vitaceae	<i>Leea guineensis</i>	S
T	tree	
S	shrub	
F	fern	

All species recorded in this study were collected by A.B. Katende, P. Ipulei or E. Kabusime, and verified by A.B. Katende.

A.B. Katende, Dept. of Botany & D.E. Pomery, Institute of Environment and Natural Resources, Makerere University, P.O. Box 7298, Kampala.

TRIALS AND TRIBULATIONS

In the early part of 1967 we felt hopeful that after we had got rid of the hyena pack in 1966, we might make a profit this year. Then on Good Friday morning, one of the cattle herdsmen reported that a steer had been killed and partly eaten on the lower part of the farm. We had often lost cattle and sheep killed by leopard and hyena or a wild dog, but the whole 'scene of the crime' looked different this time—the steer was so big and the meat taken was so large! Furthermore, it was a very dull damp morning and the surrounding bush seemed rather quiet as if a storm, or some very important person had just passed by. I fiddled about a bit and coughed and poked under bushy gullies—and then found two enormous footprints! My next thought was BREAKFAST, during which I remembered that we had had some cattle killing by lion in 1956, but nothing since. I hoped that this lion would continue on his safari and leave our cattle alone. Three weeks later I heard him roar several miles away late in

night and sure enough he killed another animal, an Aberdeen-Angus heifer this time. I sat up over the kill for two nights but the lion did not return. Then the pattern began to build up. And it killed cattle on OUR FARM ONLY for the next six months! None of our neighbours reported trouble, other than finding kills of wild game once or twice. The whole area of about 150,000 acres in the Central Rift Valley district near Gilgil, with Eburu as the 'epicentre' was ransacked with cattle and sheep, with plenty of wildlife on all five farms.

I asked the Game Department to help in trapping or killing this lion but they either had no petrol or ammo or interest in my problem, but they did loan me a very large box trap that I set often. As the lion seemed either shy or had been shot at before, he seldom returned to the kill for another feed. Perhaps he just liked his food fresh. Another beautiful heifer killed—so I prepared to sit up over the kill all night if necessary. To avoid him scenting me I sat in the back of the Landrover having covered it with bush branches. I had taken the precaution of chaining the carcass to a tree stump so that it was in full view at about 20 yards as there was small moon. I did not hear or see anything but realised that the carcass was moving!! Then the chain rattled and with a low growl the lion left—a boring cold wait until dawn. Failure again and the kills continued at odd intervals. Sometimes over a month went by without trouble and then he would return. He never touched meat that had been poisoned. He did inspect the box trap one night and in his disgust 'sprayed' the doorframe. I felt that somehow he knew that I did not appreciate his life-style. He was right! At that time each animal killed was worth about £50.

The next time he killed I took the precaution of lying up the carcass with soft rope and again positioning myself in a bushy gully about 15–20 yards away, and covered myself with branches liberally sprinkled with viscera. It was a totally black night so I had strapped a torch to my rifle and waited—and waited and waited and waited—providing a good meal for mosquitoes. He roared about a mile away causing my adrenaline to whizz around quite a bit. At last at about 10.00 PM I heard him eating but could not see even an outline. At the click of the torch he sprang back-wards over a bush and didn't return. Failure! And this was the seventh heifer killed. In the morning I checked out the scene and found that the bush he cleared with his frightened backward spring was just less than 12 feet high (YES twelve feet). Lions are strong and athletic.

After a further kill, I tried tracking him up with a pack of pie-dogs from the local camp, together with our own. The tracks seemed to wander a lot but, as we had discovered previously, he decamped for miles after making a kill. I wondered if he felt guilty or just was wise and cautious? The eleventh kill was on the night before the full moon, so there was every chance of a shot over the kill the next night—if he came back. Very little was taken from this carcass, so something must have disturbed him. I took the precaution of using rope, sitting in my ambush with care allowing for wind and even smearing guts all over the Landrover and bushes covering me.

Having got into position before sunset I felt confident of a good chance this time. And then the moon rose. And when I looked through the scope sight on my rifle, I could see nothing but brilliant light! Kilis are never in the perfect place, and I had made allowance for several factors. If he came now I would be useless, just an interested spectator.

At about 10.30 PM I heard some Eland disturbed and then there he was, standing on the far side of the kill. I waited until he came round to my side and shot him with a soft-nosed .375 bullet at about 15 yards. He gave one loud grunt and ran away! No more noise, so I went home to bed wondering if I had missed. (Looking for a possibly wounded lion in thick bush at night is NOT "living dangerously"; it is plain stupidity.) I found him at 5.30 next morning within 100 yards of the kill with a bullet hole in his lungs.

There was tremendous excitement amongst our employees and glee as we weighed him and skinned him. He had a large golden/ashen mane with no blemish anywhere, nor any disability of any kind. All his teeth were fine, he weighed 325 lbs and the straight-line length before skinning was 9 ft 2 in. Height at withers was 3 ft 6 in and his skull was 14 7/8 X 9 3/8 in. A very fine specimen that I had mounted on black felt by Messrs Zimmerman in Nairobi.

Allernote:

The mounting of the lion skull on black felt had cost £50 in fact, when added to the (£55) the lion had cost in dead cattle, brought the price of the whole venture to £105.

Some years later when I needed a lump sum to purchase new rams or a bull, I decided to offer the skin to Zimmerman again for commission sale. Whilst examining the skin laid out over a chair and the floor in his saleroom, an American sportsman with wife and daughter 'in tow' approached through the French doors. Without any introduction or preamble the man exclaimed, "Honey that's the lion I shot!" Without a word I gave Paul Zimmerman a wink and bolted out of another door, leaving him to handle the situation. That evening he telephoned to say that the American had bought the skin for—you may have guessed—£650! This neatly covered all my losses and Mr Zimmerman's commission. Apparently, the one and only lion the American had shot on a licensed Safari was a poor and undersized specimen, so he bought mine and sold his own. Truly, fact is stranger than fiction.

R.D. Morgan, Grafton Oak, Kidpeck, Hereford, HR20BP, England

NOTES

UNUSUAL CITRUS SWALLOWTAIL BEHAVIOUR

The close dependence of butterflies on plants is well known: adult butterflies feed on flowers and fruit and the caterpillars feed on plant leaves. Most people also

realise that particular species of butterflies have specific larval foodplant requirements, and that the recognition of the correct foodplant, by an egg laying female or a feeding caterpillar, is cued by chemicals in the plant.

Rather less well known are the several uses that butterflies make of particular plant chemicals. The classic example here is that of the danaine or milkweed caterpillars which store poisonous chemicals called cardenolides from their milkweed foodplants as a protection against predators. The poisons persist through the pupal stage into the adult butterfly and predators which make the mistake of eating an adult are violently ill. Male danaines also collect other chemicals called pyrrolizidine alkaloids (PAs) from dead and withered borages and other plants. They then do a bit of chemistry on the PAs, knocking off a methyl group, and turn them into sex pheromones (or perfumes) which help to persuade females to mate with them. Aggregations of male danaines on dead borages were commonly seen long before the significance of this behaviour was understood.

All of which may or may not be relevant to an unusual observation I made last June in Kilifi. I noticed from a distance that a Citrus swallowtail (*Papilio demodocus*) was paying a lot of attention to a milkweed shrub (*Calanthe gigantea*) in our garden. Curious to see why, I approached and to my great surprise saw that the butterfly, which was a male, was apparently attempting to mate with a withered and spent seed pod on the shrub. It was curling its abdomen around and grasping the edge of the pod with its claspers (normally used to hold the female during mating). It then flew off, caught the plant for some thirty seconds and landed on the pod again, repeating its abdomen-curling and clasping behaviour on the same withered pod. This sequence of events was repeated on another four occasions within the next five minutes before the butterfly finally gave up and flew off. I do not know how long this behaviour had been going on before my observations started.

There was no doubt whatsoever that the focus of the swallowtail's attention was the milkweed pod. It was also clear that whatever attracted it to the pod also stimulated mating movements in the butterfly, with the abdomen curling and clasping repeated on each occasion that it landed on the pod. Nothing is known of the pheromone biology of *Papilio demodocus*, and this species does not have a reputation for distastefulness to predators or of sequestering secondary plant compounds for defense or reproduction. Yet it seems that some sort of chemical interaction must have been involved. It is not at all unusual for plant compounds to resemble the reproductive hormones or pheromones of animals (many plants contain oestrogen), and the most likely explanation is that a chemical in the pod is very similar to a pheromone of the Citrus swallowtail and that this stimulated the mating behaviour. It may also be relevant that *P. demodocus* is a gregarious rooster, normally a habit of chemically protected species.

Ian J. Gordon, Kipepeo Project, Box 57, Kilifi, Kenya

PREDATOR OF THE NAKED MOLE RAT HETEROCEPHALUS GLABER

Recently, while I was on a short field trip to the Ngomeni area of Mwingi district from 10–11 May 1997 to catch naked mole rats, I came across a specimen of Rufous Beaked Snake *Rhamphophis oxyrhynchus rostratus* in a naked mole rat burrow.

While I was excavating the soil mound in an active mole rat site to find the entrance to the burrow, a snake was accidentally injured on the back with a hoe. It was extracted from the burrow but unfortunately the backbone was found to have been broken and hence the chance of the animal surviving was minimal and it was killed. The abdomen looked swollen so I decided to open it and to my surprise, I retrieved six naked mole rats.

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UGANDA KOB AND LIONS RETURN TO THE LEKKING GROUND IN BUNYAMPKA CRATER, QUEEN ELIZABETH NATIONAL PARK, UGANDA, FOLLOWING CONTROLLED BURNING

The Uganda kob, which forms part of Uganda's national symbol, is the commonest antelope inhabiting the open grasslands in the north and north-east of Queen Elizabeth National Park (QENP), located in the Great Rift Valley in Western Uganda.

The Uganda Kob is known for its lekking behaviour, where access of a male to females depends on the strength of the former. Therefore, most matings are done by superior males who control small territories to designated areas known as lekking grounds. A very big lekking ground occurs in the short grassland area near Bunyampaka Crater in the north-east of QENP.

The distribution of kob seems to depend on availability of tender forage, access to quality mates and easy sighting of natural enemies. These kob often graze in large numbers in open grasslands south of the Bunyampaka Crater region. This is a 15 km stretch of thickets-free grassland dominated by short spear grass *Imperata cylindrica*, *Themeda triandra*, *Hyparrhenia* sp. and scattered patches of *Cynchopogon* sp. The same area is a common spot for lions.

For over two months from March 1996, the kob had abandoned this area where the grass had become very mature and had migrated to the peripheries of the reserve. The lions had also disappeared. There were reports of increased crop raiding by kob in villages that lie on the park margins.

The Uganda Institute of Ecology, under its ecosystem monitoring programme, embarked on a burning exercise in this particular area where Uganda kob are a common sight, the first prescribed fire in more than a decade. This early burning was done just before

the dry season and the 2–3 rains that followed lead to a uniform sprouting of grass. It is well known from previous research work that lack of burning causes a deterioration in species composition and productivity of grasslands. Fires are a common occurrence in QENP, but are only set by poachers for their opportunistic ends.

When the grass was barely 10 centimetres high, the Kob, numbering in several hundreds, returned to the area to feed on the tender forage that was sprouting. Cases of crop raiding by kob in villages in the neighbourhood of the park were reduced. Daily observations have shown that on average between 500 and 2000 animals stay in this stretch of grassland, either grazing or simply resting. Uganda kob form more than 80% of this figure. Following the return of the kob after burning, lions also returned to the area in substantial numbers.

Tourists also now benefit from the easy visibility.

Acknowledgements

Thanks to the Fire Team of Uganda Institute of Ecology and QENP and also Mr Gerald Otwal for driving me to the Kob spot for observations.

Monday S. Lwanga, Uganda Institute of Ecology, P.O. Box 3530, Kampala, Uganda

THE PLACENTA-EATER LEPIDOPTERA OF ORCHIDS

This is to report a very interesting phenomenon that has not been observed before in Kenya or, if it has been observed, not a mention of it has been made. It is common knowledge that orchids are known to manipulate insects to assist in their pollination. But now it has been observed that insects are using the reproductive parts of some orchids as 'houses' where their larvae spend three to four months feeding in the protection of the seedpod. Our observation concerns the swamp orchid *Eulophia angolensis* (Reichb.f.) Summerh.

This unusual observation took place between 13 and 27 July 1996 at the Milimani Swamp. The swamp is found in Thika District and is dominated by *Typhas* and sedges (Cyperaceae), wild thorny strawberry and mahoeous bushes along the edge of the swamp. Animals e.g. snakes, birds, frogs, fish and mammals live there too. Our first glance at the swamp was stolen by the large fish-eating birds, then the thick 'forest' of sedges that has colonised the swamp. But despite the distractions, we were successful in finding *E. angolensis*, the orchid that we were looking for. What struck us is the way a few fruits of this species were malformed and had darkish sticky substances hanging from the fruit walls. We took some of the fruits for further observation. These fruits were found to have caterpillars in them that had eaten all the placentas and the young seeds. In three of the fruits the mature seeds were rolled up with faecal materials of the caterpillars that hung out through the openings in the fruits. It is only in one fruit that we found traces of egg deposition on the withered lip. Some of the fruit

samples possessed holes drilled by the caterpillars right into the center of the fruits. All three had hollow centres.

We took the caterpillars to the National Museums of Kenya, Entomology Department for identification and found that they belong to the Lepidopteran family Noctuidae. Further identification of caterpillars and adult moths captured on 30 July 1966 between 1900 and 2100 hr was obtained from Cardiff University of Wales, UK where they were identified as noctuid moths of the species *Cucula umbratica* (shark moth).

It would appear then that the insects lay eggs on the floral lips at about the time of pollination, the eggs hatch there and the larvae then wanders down the rachis eating all the floral bracts before eating through the fruit to the placentas. After eating all the placental material, they pupate and emerge as adults as the mature capsules rupture. The specimens we have preserved contain evidence of this. Although we did not explore the possibility of the shark moth being a pollinator of *E. angolensis*, such pollination by moths is not uncommon (Johnson, 1955a, 1955b).

Acknowledgements

Many thanks to Prof. Len Newton with whom I am doing fieldwork and to our assistants Mr. Charles Kinnunge and Mr. Josephat Muthanga. I wish to thank Mr. Anuro Foresti for his continued support of us. Thanks very much to Mr. John Ofula of the Cardiff University of Wales, UK.

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- Mr John Ochora, Department of Botany, Kenyatta University of Agriculture and Technology, P.O. Box 62000, Nairobi, Kenya.

HELP NEEDED! THE PLIGHT OF THE GIANT TORTOISES OF CHANGUUI ISLAND, ZANZIBAR

The giant tortoises *Geochelone gigantea* of Changuu Island, Zanzibar, are believed to have originated from Aldabra, in the Indian Ocean, in the early 19th Century. Until recently Changuu remained a safe haven for these magnificent, yet vulnerable, tortoises. In the 1950s it was reported that there were 200 tortoises on the island. However, in 1990 the population had dropped to 50. In 1996 Mr Steve Tolson drew attention to the threats that faced this unique group of animals. A survey later in the year by the World Society for the Protection of Animals (WSPA), together with Professor John Cooper, revealed that only nine adults remained on the island. It appeared that tortoises were being stolen, probably to supply the international trade. That any adults would remain by the

millennium seemed extremely unlikely.

At the time of the 1996 survey there were also 84 baby tortoises on Changuu, but these were kept in poor conditions in a locked shed. Originally babies were released on the island when they reached five years of age, but the likelihood of their being stolen meant that they now had to remain in the shed, with dwindling numbers of hatchlings joining them each year. It was disturbing news that the 1996 survey revealed no small-to-medium-sized tortoises, even though each year a new batch had been released from the rearing shed.

Something had to be done quickly to ensure that the giant tortoises would survive, so WSPA, in conjunction with the Zanzibar Tourist Corporation and the assistance of Drs Meredith Kennedy and Dennis Doughty, both veterinarians, developed a rescue plan. In September 1996 all 84 babies were relocated to a fenced compound in the grounds of Livingstone House on the main Zanzibar Island, while the nine remaining adults were numbered and closely monitored on Changuu.

Disaster struck soon after, when in November 1996 over half the youngsters were stolen from their compound on Zanzibar, and two adults (a male and a female) disappeared from Changuu. However, this setback turned to advantage. A US \$500 reward prompted an informer to come forward and as a result, a man was arrested in Dar es Salaam. Nine adult tortoises were seized (including the two recently marked ones stolen from Changuu), and all were returned to Zanzibar. Further information led authorities to another person who was found to be in possession of 13 adults, 8 mid-aged and 31 youngsters.

These seizures have quadrupled the Zanzibar population of adult giant tortoises and show what can be achieved by dedicated effort in a relatively short space of time. However, stronger security measures, better vigilance, veterinary tests on confiscated animals and funding for the larger food bill, are all essential to increase the population on Changuu and to provide the tortoises with a secure future. We are therefore seeking the assistance of herpetologists, naturalists, and other concerned persons in order to provide these. For further information on how you can help, contact John E. Cooper.

Information about the appeal and its achievements will be widely published in herpetological and conservation journals.

Steve Tolson & John E. Cooper, Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, Kent, CT2 7PD, England

BOOK REVIEWS

Birds of Kenya and Northern Tanzania. D.A. Zimmerman, D.A. Turner & D.J. Pearson. ISBN 1-8750191-04-1. Pp 740, 124 colour plates, numerous line drawings & distribution maps for most species. Russel Friedman C.C., P.O. Box 73, Halfway House, 1685, South Africa. Available from the EANHS office at a reduced price to members only.

I hate to be among the "who've" and "if only" brigades, but this bird guide almost puts me there. If only I had had such a guide when I first arrived in East Africa, thirty years ago, to help me sort out the vast array of bird species. I remember my struggles with the first edition Williams and its black and white waders among many others and the need to consult the Guide to the National Parks in order to identify some of the rarer species. Since I bought this book I think I have consulted it almost every day. I have learned so much and continue to learn every time I open it—even new terminology.

The 52 page Introduction gives a complete overall description of habitats to be found, terminology of bird identification with a glossary of terms used, extensive geographic information including weather patterns, and a brief description of sites where birds are most easily seen depending on the birders' time and ability. Maps show major area lakes, parks, etc. Good, extremely comprehensive text on all the species, wonderful illustrations—especially useful to have waders and birds of prey and gulls in flight. Separate illustrations for birds of prey in dark morphs make them easier to identify. Particularly good are the details of tail feathers in nightjars and other species where this is often the only obvious field mark.

This book caters for all serious ornithologists, at all levels. The information given may indeed be more than a casual observer can easily cope with and this was a comment from one of my birders that she had difficulty getting through the depth of information to the essentials which would help her to identify a bird. The size of the book makes it more of a book of reference than a burden to be carried in the field and I would not recommend it for the absolute beginner but for all those with any serious interest in birds, it is an absolute must. This publication is in my opinion the fruit to put Kenya on a close footing with South Africa, which has always enjoyed a wealth of good bird guides. I am overjoyed to have it on my shelf, always close at hand.

Martene Reid, PO Box 80429, Mombasa
Editor's note: Mrs Reid leads regular birding walks in and around Mombasa and the Kenia Coast.

The Kingdon Field Guide to African Mammals by Jonathan Kingdon. Pp 465. Illustrated by the author/artist throughout in colour and black and white. Soft cover. Academic Press, London. Price £29.95. Available

at Text Book Centre, Nairobi.

Jonathan Kingdon's seven volume *East African Mammals: An Atlas of Evolution* is one of the 20th century's great works on African wildlife. Ever since the first volume appeared, many people have hoped that his material would become available in a smaller, more compact format. This has come to pass. The *Kingdon Field Guide to African Mammals* covers Africa's known 1,150 mammals.

As a field guide this work sets new standards for the genre. Kingdon is something of a polymath: whose interests, *inter alia*, straddle the fields of evolution, taxonomy, behaviour and art. On the one hand he is a leading thinker in the biological sciences, and on the other an academic artist. His teaching career was at least initially as a University Lecturer in an Art and not Science faculty. This unique combination of talent makes his new volume an outstanding compendium of information on Africa's entire mammalian fauna, accompanied by paintings and sketches that illustrate mammals more cogently than photographs ever can.

Standard information given is an introduction to each order, family and genus—with original insight into their evolution—before presenting the individual species. English, French, German and Swahili names are given, followed by average body measurements and weights, sub-species, distribution (with maps), habitats, foods, behaviour, adaptations and conservation status. In certain taxa where the present state of human knowledge is very thin (e.g. *Crocodyra*, the white-toothed shrews, with 113 species), species are listed, but the genus rather than species is treated as the descriptive entry. Within this standard formula, Kingdon presents an eclectic, but fascinating selection of information.

The text is a tad too technical for some laymen, though this is not a serious defect. Latin names may have to do for the shrews and bats, as many really have no well-used common names. Yet for laymen (and field guides are primarily for laymen), they are a nuisance where the well-known larger animals are concerned. For example, 'bongo' would have been more appropriate than '*Tragelaphus euryceros*' on the distribution map which, in this case, is eight pages from the species' text. Similarly 'lion' is altogether less laboured than '*Panthera leo*'.

Throughout, the reader senses that the author was bursting with additional information that he was barred from presenting through lack of space. This leads to the book's biggest weaknesses. I believe that it is the Academic Press's first attempt at a field guide and this shows. Having published Kingdon's seven seminal volumes, the firm was aware of the vast knowledge the author had at his disposal. Yet throughout the *Field Guide* there is a sense of both penny pinching and poor planning. While there is a checklist at the front of the book that gets the reader about the text adequately, the book has no index. The author was told that if he wanted an index he had to reduce the text. Yet there are five blank pages for 'notes' at the end of the book—surely a luxury of lesser importance than an index? The map of Africa's rivers and lakes on page 447 is so

reduced (5.8 x 5.4 cm) that detail has become a meaningless scribbly blob that is an insult to the reader. Elsewhere, some of the species distribution maps have been so reduced that the accompanying Latin names are unreadable to many without a magnifying glass (e.g. *Sylvicapra grimmia* on p. 368). This absurd reduction is also apparent in some of the diagrams (e.g. that displaying bovid ecological niches on p. 347). Such thoroughly bad bookmanship is inexcusable—the more so because at £30 the volume is expensive for a paperback.

These severe criticisms notwithstanding, *The Kingdon Field Guide to African Mammals* is attractively laid out. As the only field-guide to African mammals that includes all the mammalian orders, it is outstanding. Yet what really lifts this book far beyond the excellent competition (e.g. *The Larger Mammals of Africa* by Chris & Tilde Stuart) is Kingdon's wealth of biological information combined with his grasp of both evolution and ecology. To get this assembled in a single field-guide makes the book a very good buy indeed. The good points so outweigh the bad that I recommend it unreservedly as the best guide to Africa's mammals currently on the market.

I S C Parker, Laigata, Kenya

SOCIETY NEWS

RESULTS OF THE EANHS BULLETIN QUESTIONNAIRE

First let me again thank all of the people who have returned their questionnaires. The information you supplied was very helpful when trying to decide how to proceed with the new style of Bulletin. Nearly five percent of the questionnaires were returned which is not bad for this kind of survey.

The following graph (figure 1) was a great pleasure for the editors to see. Apparently we have been doing something right as there seems to be general satisfaction with the content. Other comments such as "Why are you asking, you are doing fine?" seemed to confirm this general consensus. The responses themselves are very interesting. As the graph shows, most respondents like the present balance of articles. Whether those who responded are truly representative of the readership as a whole is, of course, open to question. We have no way of knowing.

Upon looking at the preferred articles, it was interesting to note that the most popular were conservation orientated such as those on Kakamega and the Shumba Kipepeo Project. This general interest by the members was also revealed in the results of the questionnaire on the Society itself, where advocacy and conservation were strongly favoured in responses to various questions. As the Society takes a greater role in conservation and advocacy, I hope to see more of this kind of article.

Hopefully, many of the 'Comment' articles will deal with conservation advocacy as well.

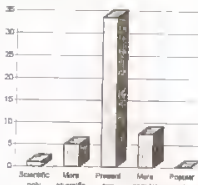


Figure 1 Number of respondents favouring each option on the present content of the EANHS Bulletin

Always popular, and certainly revealed so from the results of the questionnaire, are articles recounting specific happenings and articles on individual species of animals. All such articles were very favourably responded to.

No article was universally disliked, but there was a definite coolness towards those articles reporting on conferences, workshops and meetings. This said, it appeared in most cases that it was the frequency of meetings and workshops that never lead to anything at which the disapproval was aimed. While reporting the results of these is sometimes important, we will try not to overburden the readers with such items.

Of the returns, 72% indicated that the respondent would like to contribute material to the Bulletin. Everyone who said they would contribute is welcome and encouraged to do so as soon as they can. We are in real need of material—particularly popular articles and drawings, but all kinds of material are needed. The fact is that most of the time what goes into the Bulletin is entirely dependent upon what is on hand at the time of preparation. So if we don't have enough articles of one kind, we tend to put in what we do have. As most of those indicating that they would like to contribute didn't give their names, I can only say thank you and please send it that you have. It is most welcome.

Comments were many and varied. Some of the more interesting were the suggestions to include resumes of the lectures (would whoever suggested this be interested in doing the job?), more readers' letters with replies if possible (again, depends upon the readers to write), articles about what each of our projects and sub-committees are doing, and one particularly interesting suggestion that we have a 'scandal section' by which I believe the respondent meant a column on controversial issues which could be mentioned without necessarily mentioning the authors' names. Particularly pointed out in this regard was the Bamburi Cement Factory's proposed clinker plant just outside Nairobi National Park. What is a supposedly 'green' organisation doing building such a pollution generating plant just outside a national park (or anywhere for that matter)?

TWENTY-FIVE YEARS OF WEDNESDAY MORNING BIRD-WALKS



The Society's Wednesday Morning Birdwalks began in 1971. This means more than 1300 outings to look at birds over the years! At the 25th anniversary last year, Fleur Ng'weno, the founder and main leader of the birdwalks, received a bouquet of flowers. Many other enthusiastic birders have helped to lead the ever-popular birdwalks. Photo by Bellina Ng'weno.

MEMBERS' LETTERS

Dear Sirs,

I have been a member on and off for many years, and the reason that I am writing is to ask if anything has ever been written on the spiders of East Africa, presumably including the scorpions and centipedes.

One hears and reads, for example that a bite from a baboon spider is comparatively harmless and yet I have seen women coffee pickers who have been bitten by a type of largish brown, slightly hairy spider suffering considerably until they were rushed to hospital and given a shot of adrenaline. What about some of the aggressive

looking jumping spiders and black widows with red 'hour glasses' on their stomachs of which I have seen at least three, on different occasions? Also, some of those extraordinarily shaped orb web spiders and the golden orb spiders that I'm sure must trap small birds in their webs, particularly in the narrow streets of Mombasa as well as in the coastal telegraph lines. It would be interesting to know who were their enemies, i.e. those members of the homer family. Has anything been written about the solifuges—large and small, which appear to be fond of meat? And, although, I have not met one, what of the comparatively common, large spiders that live in deep holes near Ndara Ranch, not far from Voi? I heard that there was a German who was paying toros to collect them, for sale in Europe.

As well, have any records been kept of local, native cures against bites? Many years ago, I was stung by a scorpion and an Ndorobo who was with one spit on the wound on my ankle and rubbed in stuff from his banana leaf container and, immediately, the pain changed to that of 'pins and needles' and after a day, completely disappeared.

Yours sincerely,
M D Carnelly, Fisherman's Camp, Box 79, Naivasha,
Kenya

The editors as well as Mr Carnelly would be most interested in receiving answers to his several questions

NOTICES

Memorial erected to Ionides

A plaque, commemorating the life and work of C J P Ionides, the famous herpetologist and naturalist, was unveiled at the Nairobi Snake Park on Wednesday 31 July, 1996.

This plaque was paid for by the Ionides Memorial Fund—the remainder of the Fund is to be used for a special exhibit within the Snake Park.

Ionides died in Nairobi in 1968, having spent 43 years in East Africa. He contributed much to our knowledge of African zoology and was particularly recognised for his work on snakes.

Further information about the Fund or the life and work of C J P Ionides can be obtained from Professor John E. Cooper, Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, Kent CT2 7PD, UK or Mr Michael Cheptumo, Curator, Snake Park, National Museums of Kenya, P.O. Box 40658, Nairobi, Kenya.

Request for specimens

I would like to inform the members of the EANHS that the Osteology Department of the National Museums of Kenya maintains a collection of skeletons of all vertebrates including domestic animals occurring in East Africa. Any member who finds a vertebrate specimen in reasonable condition (from road kills and other accidents for example) is requested, if at all possible, to bring the specimen to the Natural Science Building, Bottom Floor (Attention Oguto Mwangi or Kibiyi) as soon after the find as possible. Small specimens can be kept, if necessary, in a deep freeze until they can be brought to the Museum. Your gift should be labeled with your name, address, the date and location where the specimen was found and the cause of death if known. Your help will minimise the need for the Department to obtain specimens from the wild and will be highly appreciated.

Thank you,
Nina Mudida, Head, Osteology

Allocation of public land to private persons

Members may be interested to know that in a recent Court case the High Court of Kenya (A. Mbughohi Msagha, Judge) issued an injunction to restrain some developers from taking possession of, fencing and/or in any way howsoever developing or selling two pieces of land in Nairobi which were shown in the relevant subdivision scheme approved by the Commissioner of Lands as reserved for 'public utility'.

Details of the case: Paul Nderitu Ndung'u and Others—vs.—Pashito Holdings and Another, High Court Civil Case No. 3063 of 1996, are contained in the Ruling issued by Msagha J dated 18 April 1997. A copy of that ruling is available in the EANHS office.

This ruling provides a precedent for preventing development of land that has been specifically reserved for 'public utility'. Whether it will apply to other public land, e.g. forest land under the Forest Act, remains to be seen.

EANHS MEMBERSHIP RATES PER ANNUM

	Local	USA	UK
Life	1000*	200	130*
Corporate	5000	200	130*
Sponsor	1000	50	35
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Full	350	15	10
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* * Only children under 18 and full time University undergraduates. Graduate students register as full members.

Membership offers you free entry to the National Museums, free lectures, films or slide shows every month in Nairobi, field trips and camps led by experienced naturalists, free use of the joint Society-National Museum Library (postal borrowing is possible) a monthly newsletter and a copy of the EANHS Bulletin every four months, and reduced prices on other publications. The Society is the BirdLife Partner in Kenya. It organises the ringing of birds in eastern Africa and welcomes new members. It also runs an active Nest Record Scheme.

Subscriptions are due on 1 January. From 1 July you may join for half the yearly subscription and receive publications from that date. Application forms may be obtained from the Hon. Secretary, Box 4436, Nairobi, Kenya.

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The *Bulletin of the EANHS* is an ornithological magazine issued three times a year, which exists for the rapid publication of short notes, articles, letters, and reviews. Contributions may be in clear handwriting, printed or on disk. Black and white photographs and line drawings are most welcome. Please send to the Editor (EANHS), Box 57, Kilifi, Kenya.

The *Journal of East African Natural History* is published in collaboration with the National Museums of Kenya. It is published two times a year. Contributions (three copies), typed in double spacing on one side of the paper, with wide margins, should be sent to the Editor (EANHS), Box 57, Kilifi, Kenya. Authors receive 25 copies of their article free of charge.

Ornithology is the publication of the Ornithological Sub-committee of the EANHS. It is published two times per year. All correspondence should be sent to D.A. Turner, Box 48019, Nairobi, Kenya.

Kenya Birds is a publication of BirdLife, Kenya. It is published two times per year and contains popular and informative articles on birds and birding in Kenya. Correspondence should be sent to Dr. Leon Bennon, Box 44486, Nairobi, Kenya.

Ballya is published three times a year by Succulentia EA, a division of the EANHS. Members of the EANHS can join Succulentia EA, and receive *Ballya*. Contributions to *Ballya* can be sent to Professor L.F. Newton, Box 38995, Nairobi, Kenya.

